

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	
Amendment of Part 2 of the Commission's Rules)	ET Docket No. 00-258
to Allocate Spectrum Below 3 GHz for Mobile)	
and Fixed Services to Support the Introduction of)	
New Advanced Wireless Services, including Third)	
Generation Wireless Systems)	
)	
Amendment of Section 2.106 of the Commission's)	ET Docket No. 95-18
Rules to Allocate Spectrum at 2 GHz for Use)	
By the Mobile-Satellite Service)	
)	
The Establishment of Policies and Service Rules)	IB Docket No. 99-81
for the Mobile-Satellite Service in the 2 GHz Band)	
)	
Petition for Rule Making of the Wireless)	RM-9498
Information Networks Forum Concerning the)	
Unlicensed Personal Communications Service)	
)	
Petition for Rule Making of UTStarcom, Inc.,)	RM-10024
Concerning the Unlicensed Personal)	
Communications Service)	

REPLY COMMENTS OF UTSTARCOM, INC.

UTStarcom, Inc. ("UTStarcom"), by its attorneys, hereby replies to the comments filed in response to the Commission's *Further Notice of Proposed Rulemaking* regarding reallocation of additional frequencies for 3G and other wireless services.¹ As in its initial comments, UTStarcom confines this reply to issues concerning the 1910-1930 MHz unlicensed PCS band ("UPCS") and, in particular, focuses on rule changes proposed in its Petition for Rulemaking RM-10024, ("UTS Petition") to develop community wireless networks in the 1910-1920 MHz segment of the UPCS band.

¹ Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services,

INTRODUCTION AND SUMMARY

Many parties stressed the need for the Commission to proceed expeditiously in its consideration of the future of the 1910-1930 MHz UPCS band so that those using or seeking to use UPCS spectrum can proceed with their plans.² Separating consideration of the UPCS band issues from the 3G proceeding will preserve the viability of the current UPCS industry and permit a rapid deployment of a range of low-cost telecommunications services to communities currently lacking such services.

Many parties are opposed to reallocation of the 1910-1930 MHz UPCS band for 3G services or for those displaced by 3G services and believe that reallocation of UPCS spectrum would be “contrary and detrimental” to the public interest.³ Even several of the parties who advocate the reallocation of the band for 3G services express concerns about its proximity to the licensed PCS band.⁴

There is also substantial support for, and little opposition to, UTStarcom’s proposal to allow community wireless networks in the 1910-1920 MHz band.⁵ In general, those advocating relatively low-power, limited-area, limited-mobility services

including Third Generation Wireless Services, 32 Comm. Reg. (P&F) 1923 (2001) (“Further Notice”).

² See e.g., Avaya, Inc.; NEC America, Inc. (“NEC”); PHS MoU Group; UTAM, Inc.

³ Avaya, Inc. at 1; see also, Motorola, Inc. (“Motorola”); NEC; The Rural Telecommunications Group (“RTG”).

⁴ See Cingular Wireless at 12 (not optimal for advanced wireless given proximity to PCS bands); Ericsson at 7-8 (because the 1910-1930 MHz band is next to PCS band, any new services must have sufficient safeguards to protect existing users).

⁵ See, e.g., Midstate Communications, Inc. (“Midstate”); Midvale Telephone Exchange, Inc. (“Midvale”); Penasco Valley Telephone Cooperative, Inc. (“Penasco”); Blackfoot Telephone Cooperative, Inc. (“Blackfoot”); RNI Communications Corp. (“RNI”); Quantum Communications, Inc. (“Quantum”); Aviatel, Inc.; RTG; UTAM, Inc.; Motorola; iBee Communications, Inc. Only Constellation Communications Holdings, Inc. (“Constellation”) believes that the Commission should reject UTStarcom’s proposal. See Constellation at 17. However, Constellation’s argument that “specific designation of service applications is inefficient spectrum allocation” is completely misplaced. UTStarcom has not requested a specific designation of a service application; merely some modest changes to rules already in place designating the 1910-1920 MHz band for UPCS. The point is that these rule changes would permit a wide variety of low-power, limited-mobility applications, including the one for which the spectrum initially was allocated.

support leaving the UPCS bands unlicensed; some propose “pocket licensing” as an alternative, if the Commission chooses to impose a licensing scheme.⁶

Accordingly, the Commission immediately should separate the UPCS issues from the 3G proceeding and issue a notice of proposed rulemaking to adopt changes in its Part 15 UPCS rules in order to allow the deployment of community wireless networks to serve long-standing, unmet telecommunications needs in rural areas and for underserved communities.

DISCUSSION

I. THE COMMISSION SHOULD SEPARATE THE 1910-1930 MHz UPCS BAND RULEMAKING ISSUES FROM ITS 3G PROCEEDING.

Not surprisingly, the overwhelming sentiment of parties with interests in the 1910-1930 MHz UPCS band is opposition to any reallocation of the band for 3G wireless services or for use as a relocation band for those displaced by 3G services.⁷ Other parties, including PCS equipment manufacturers, echo this position. Motorola, for example, finds that “allocation of this band for either 3G services or [relocated services], would result in considerable interference to PCS,” and NEC America is, *inter alia*, concerned about interference, disruption of incumbents, including public safety users, and harm to competition.⁸

UTStarcom and others have noted that the characteristics of 1910-1930 MHz band are well suited for relatively low-power, limited-area, limited-mobility services, but are not suited to 3G services.⁹ Rather than submerge the UPCS issues in the 3G proceeding, with the attendant delay that would entail, the Commission should address the relatively straightforward issues regarding UPCS band usage in a separate rulemaking proceeding.

⁶ Midstate at 2; Midvale at 2.

⁷ See, e.g. Avaya, Inc.; RTG; Quantum; PHS MoU Group; Midvale; Midstate.

⁸ Motorola at 15.; see also NEC at 4-23.

⁹ UTAM, Inc. at 16 (reallocation will upset expectations of industry and users); Wireless Information Networks Forum, Inc. (“WINForum”) at 9 (3G band use not consistent with international consensus; reallocation would eliminate necessary guard band).

II. THE COMMISSION IMMEDIATELY SHOULD MODIFY ITS PART 15 RULES TO ALLOW FOR THE USE OF ISOCHRONOUS DEVICES, SUCH AS THOSE USED FOR COMMUNITY WIRELESS NETWORKS, IN THE 1910-1920 MHz BAND.

As UTStarcom noted in its comments, there is substantial support to change the rules for the 1910-1920 MHz band to accommodate isochronous transmissions and an urgent need to deploy advanced telecommunications services to underserved communities. Several rural telephone carriers, such as Midstate, Midvale, Penasco Valley, and Blackfoot, point to the importance of “cost-effective access” in rural and underserved areas. Others, such as the PHS MoU Group, cite the immediate need to harmonize the 1910-1920 MHz band rules across the Americas.¹⁰

Moreover, the National Telephone Cooperative Association (“NTCA”) recently released data on the ability of its members – largely rural exchange carriers – to obtain wireless licenses that demonstrates the need for the Commission to move forward in adopting a regulatory framework for affordable community wireless communications services.¹¹

Finally, modifying its rules to allow for operation of voice communications in the lower half of the UPCS band will permit the Commission to satisfy a range of waiver requests to operate localized communication services from such petitioners as Ascom, Lucent, Alaska Power and Telephone, and UTStarcom and Drew University.¹²

III. RESPONSES TO THE COMMISSION’S QUESTIONS.

Responses to the Commission’s questions regarding use of the 1910-1920 MHz band largely provide support for the UTS Petition, as well as for the more generic use of the band for isochronous use. These positions, based on the responses to the Commission’s questions, are discussed below.

¹⁰ PHS MoU Group at 1.

¹¹ NTCA 2001 Wireless Survey Report, Sept. 2001 (“NCTA”).

¹² Ascom Pet. for Waiver, DA 00-2833 (filed Sept. 13, 2000); Lucent Pet. for Waiver, DA 99-1242 (filed May 24, 1999); Alaska Power & Telephone Company Inc. Pet. for Waiver, DA 01-2308 (filed Aug. 16, 2001); UTStarcom and Drew Univ. Pet. for Waiver, DA 00-2061 (filed Jul. 7, 2000).

A. The 1910-1920 MHz Band Can Best Accommodate Community Wireless Networks.

The proposals to allow isochronous transmissions, such as UTStarcom's proposed community wireless networks, in the 1910-1920 MHz band received support not only from small carriers and rural interests,¹³ but from UPCS equipment manufacturers who stressed the considerable cost and service benefits to U.S. consumers if the Commission were to harmonize its rules with those in other countries.¹⁴

Harmonization of the band with spectrum usage worldwide will result in cost savings from operation of low-cost, internationally standardized systems. Such cost reductions will lead to increased U.S. wireless use comparable with levels in other countries. The ultimate benefit will be to encourage the rapid and cost-effective deployment of needed services to rural areas and underserved populations.

B. An Unlicensed Regulatory Framework Best Supports Community Wireless Networks.

As UTStarcom noted in its comments, it revised its original proposal that the spectrum for community wireless networks be licensed on a geographical basis no larger than the area covered by a "single, wired teleco central office," in favor of leaving the 1910-1920 MHz band unlicensed.¹⁵ The primary reason for that change was that the Commission had never issued wireless licenses in areas anywhere near as small as a single central office or even a single county. Allocating licenses based on any current license area definition would result in license sizes far too large to be affordable by most small companies.

For the most part, other parties confirm the validity of UTStarcom's position.¹⁶ For example, Quantum Communication, Inc. states that, while it likely could offer a

¹³ Midstate; Midvale; Penasco; Blackfoot; RNI; Quantum; Aviatel; RTG; Letter from Robert Hart to FCC (Oct. 2, 2001); Telephone Consulting Association, Inc.

¹⁴ See, e.g., UTAM, Inc.; Avaya, Inc.; Motorola; WINForum and Nortel Networks, Inc.

¹⁵ UTStarcom at 6.

¹⁶ See, e.g., Blackfoot; Midstate; Midvale; Penasco; Quantum; RNI.

very local service covering a few blocks of New York City on unlicensed spectrum, an auction process, or other licensing solution, “would leave the cost of spectrum far too high for an operator only looking to provide service covering a few blocks,” and would sell for far more than a licensee could recover in such a small area.¹⁷

Several rural telecommunications providers also offer evidence of the difficulties encountered in trying to persuade major wireless license holders to allow small carriers to obtain small amounts of spectrum in very small geographic areas.¹⁸ Indeed, the NTCA’s recent survey of rural wireless use found that, although 41 percent of survey respondents have contacted a wireless licensee about geographic portioning or spectrum disaggregation --- portioning off a portion of its geographic service territory or splitting off a portion of its spectrum for use by the respondent company, 52 percent of these were not successful, 33 percent were successful in their efforts, and 15 percent are still in negotiations.¹⁹

Additionally, the NTCA survey showed that 72 percent of small company respondents indicated that they would not participate in future auctions due to the high cost of spectrum and due to the requirement that they bid against large carriers for spectrum.²⁰ Allocating licenses to very small areas would rectify this problem, though this is not consistent with Commission auction policy.

Due to the Commission’s experience with large license areas in prior auctions, which resulted in exceedingly high prices for spectrum covering only small geographic areas, UTStarcom agrees with these commenters, as well as with the current UPCS vendors, that the spectrum should remain unlicensed.²¹

¹⁷ Quantum at 2.

¹⁸ See, e.g., RNI at 1 (large carriers seem unwilling to part with small amounts of spectrum); Quantum at 1 (large operators “uniformly disinterested” in permitting access to local spectrum).

¹⁹ See NTCA at 3, 7.

²⁰ Id. at 5.

²¹ See RNI; Quantum; Aviatel, Inc.; iBee, Inc.. Only very large companies recommended or implied that the band be licensed for 3G services. See Cingular Wireless; Orange Group; Siemens Corp. As an alternative, UTStarcom would agree that, if the Commission chooses to require licensing, that the licenses be “pocket” licenses or other very small license areas.

C. The 1910-1930 MHz Band Can Accommodate Both Existing UPCS Users and Community Wireless Networks.

UTAM, Inc. stated that it supports conditional use of the 1910-1920 MHz band for rural wireless telephone service, such as proposed by UTStarcom, but conditions this “support” on retention of the “Part 15 etiquette” and rejection of any increase in power for devices in the band.²² UTStarcom strongly opposes such conditions.

The minor increase in spectral density/power levels in the 1910-1920 MHz band would not increase the level of harmful interference to users of the band or adjacent UPCS or PCS bands. In the case of the PCS bands, the power levels of the community wireless networks still would be far below the power levels of PCS phones and would, therefore, be compatible with PCS systems. With respect to existing UPCS bands, there are no asynchronous systems operating at 1910-1920 MHz and the new community wireless networks would not operate in the 1920-1930 MHz band, so they would not interfere with existing isochronous systems. Isochronous systems that require all 20 MHz of the UPCS band for very high density applications will very likely operate indoors and would be sufficiently isolated from community wireless networks as to pose no danger of harmful interference.

With respect to UTAM’s insistence on maintenance of the “Part 15 etiquette,” there would be little development of the 1910-1920 MHz band generally and no use of the band for community wireless networks, if the spectrum etiquette used in the upper half of the UPCS band were to govern the lower half. The etiquette requirement is a prime factor contributing to the lack of full development of UPCS in the United States and, if applied at 1910-1920 MHz, would doom the opportunity for readily-available, low-cost equipment, which is essential to the development of community wireless networks. Extending the existing isochronous etiquette to the lower half of the UPCS band would provide nothing new for rural operators or underserved communities. As a result of the etiquette and the lack of harmonization with spectrum rules in other countries, current isochronous systems may be used for only one application in only

²² UTAM, Inc. at 16.

one country and, therefore, are too expensive for community wireless deployment. Extending the same rules to the lower end of the UPCS band will not change these economic realities.

As noted in the comments of UTStarcom and others, there are significant benefits to be derived from harmonization of Commission rules regarding 1910-1920 MHz with those of the rest of the world. The UPCS etiquette is not used anywhere else in the world, yet many wireless systems co-exist without interference. For example, both PHS and DECT are common in PBX applications in Australia, Taiwan, Hong Kong, Singapore, and Thailand. In Japan, private Wireless PBX systems using PHS technology operate in a total allocation of 7MHz, with additional spectrum allocated to public PHS systems. The Commission's rules should be brought into conformity with the rules in other countries.

In order to accommodate UPCS vendors who made investments in systems supporting the current isochronous etiquette, UTStarcom supports leaving the etiquette in place in the 1920-1930 MHz half of the band while relaxing the etiquette requirements in the 1910-1920 MHz half. Relaxation of the requirement will not preclude operation of the existing UPCS systems across the full band, but rather will allow existing systems to gain an advantage in high-density applications where they would have access to the full 20 MHz of the UPCS band, while other systems that did not conform to the current 1920-1930 MHz etiquette would have access only to 10 MHz.

This, in fact, should meet the needs of the parties supporting reclassification of the 1910-1920 MHz band for isochronous communications. Based on the comments of WINForum, Avaya, and NEC and on the waiver petitions filed by Ascom and Lucent, the need to expand the traffic handling capabilities of single systems in high traffic density environments appears to be a primary requirement. The etiquette is not required for such applications.

In order to meet the demand for more simultaneous calls in a confined space, apparently either the trading floor of an exchange or within a large warehouse, a

wireless system must have access to all possible frequencies. The etiquette is designed to allow systems using different air interfaces to co-exist in the same spectrum at the expense of some traffic-handling efficiency. In the cases where all possible channels are needed for a single system, the UPCS systems would not be able to serve the customer need if outside interference was encountered and the etiquette caused the system to “back off.” Accordingly, there seems little value in maintaining the current etiquette across the entire band.

E. The Commission’s Rules Need Only Minimal Changes To Accommodate Community Wireless Network Needs.

In its comments, UTStarcom suggested making modest changes to relax the existing Part 15 UPCS rules. The suggested changes primarily would: (1) permit the operation of isochronous devices in the 1910-1920 MHz band and require the coordination of those devices with fixed microwave services through UTAM, while continuing to permit asynchronous devices that are compliant with the existing rules; (2) modestly increase spectral density/power levels, still leaving them lower than the allowed levels for PCS Band Uplinks ; and (3) allow continuous transmission of a control channel in the absence of message traffic.

If adopted, these changes would be consistent with concerns expressed by some parties regarding the 1910-1930 MHz band’s use as a guard band at the center of the licensed PCS band²³ and would permit the rapid deployment of low-cost and varied telecommunications services to all communities currently lacking such services.²⁴

²³ See, e.g. Verizon Wireless; Cingular Wireless; Wireless Communications Div. of the Telecommunication Industry Assoc.; Motorola; Ericsson; Cellular Telecommunication and Internet Assoc.

²⁴ Another approach could be to apply the current Part 24 portable limits, which pertain to devices transmitting in the 1850-1910 MHz licensed PCS band, to both fixed and mobile devices operating in the 1910-1920 MHz UPCS band. This would protect the PCS band, since the rules for devices operating next to the band would be identical to the rules for devices operating in the middle of the band.

CONCLUSION

For the reasons set forth above, UTStarcom respectfully urges the Commission promptly to initiate a rulemaking and to adopt rules that permit the rapid deployment of a variety of low-cost communications services to all communities currently lacking such services.

Respectfully submitted,

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